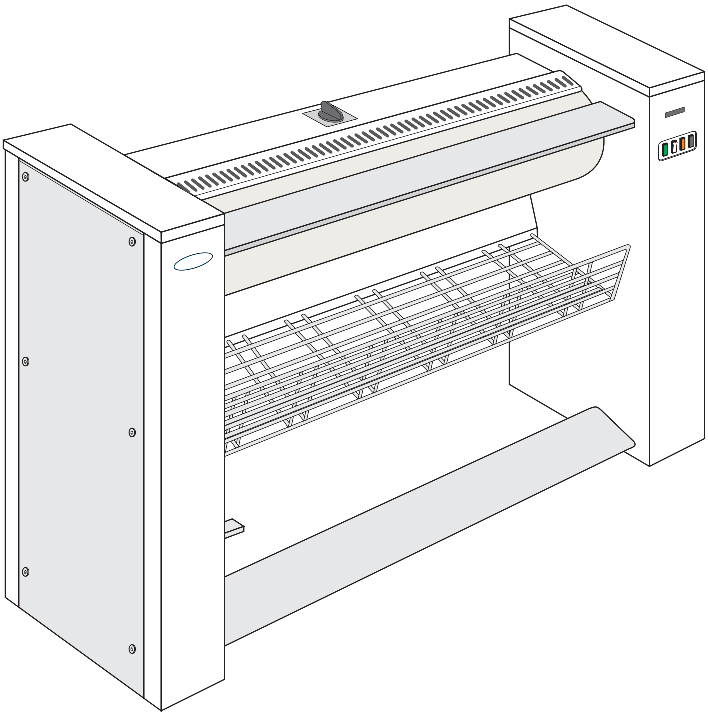
Installation manual

Ironers
IB42310 – IB42314 – IB42316



Thinking of you
Electrolux

05405004/GB
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Environmental information

Concerned by providing the end user with useful and necessary environmental information, we wish to precise:

- Data about energetic consumptions, wastes (atmospheric and liquid) and sound level are indicated in the paragraph "Technical characteristics".
- Forseeing its recycling, this machine is fully dismantable.
- This machine is free from any asbestos.
- In conformity with French regulations:
    - Law No. 76-663 of July 19th 1976 ;
    - Decree No. 77-1133 of September 21st 1977 ;
    - The decree of 7th July 1992 ;
    - The decree of 29th December 1993 ;
    - The decree of 28th December 1999 ;
    - No. 2311 of the nomenclature for classified installations.

Commerical linen cleaning laundries and launderettes are subject to:

- prefectural authorisation if the washing capacity exceeds five tonnes per day,
- a declaration to the prefecture if the washing capacity exceeds 500 kilos per day but is below or equal to five tonnes per day.

- In application of the Law of 15 July 1975 and the decrees of 01 April and 13 July 1994 on the disposal of industrial and commercial packing waste «All owners of packing waste producing a weekly volume below 1100 litres can forward these to the local collection and treatment department. If exceeding this volume, the owners of packing waste will ensure their valuation by reuse, recycling or, any other action aiming at producing reusable materials or energy... or provide them contractually to a certified intermediate authorised to transport, trade or broke waste».

Therefore, these texts forbid:

- land filling raw waste ;
- open air burning or incineration without energy collection.

- Packaging of our machines are according with the provisions of decree 98-638 from July 20 1998 related to environment requirements.

For additional information, do not hesitate to consult with our environmental department.

1. Preliminary instructions

This machine should be installed in conformance to the health and safety regulations, and only used in a sufficiently aerated area.
Check the instructions before installing or using the machine.

SAFETY

The mechanical and electrical installation of the machine should only be done by qualified personnel.

CAUTION

Do not use the machine unless it is plugged into a correctly earthed power socket complying with standards in force.

CAUTION

Make sure the machine is disconnected from the mains before repairing or servicing.

CAUTION

Any repairing or maintenance operation should be carried out by a specialist.

Note about the A.C. power

According to the EN 60204-1:1997 standard, the machine is provided for AC supplies corresponding to the extracted caracteristics below :

4.3.2 AC supplies

Voltage:

Steady state voltage: from 0.9 to 1.1 of nominal voltage.

Frequency:

from 0.99 to 1.01 of nominal frequency continuously.

from 0.98 to 1.02 short time.

Harmonics:

Harmonic distorsion not to exceed 10 % of the total r.m.s. voltage between live conductors for the sum of the second through to the fifth harmonic. An additional 2 % of the total r.m.s. voltage between live conductors for the sum of the sixth through to the 30th harmonic is permissible.

Voltage unbalance:

Neither the voltage of the negative sequence component nor the voltage of the zero sequence component in three-phase supplies shall exceed 2 % of the positive sequence component.

Voltage interruption:

Supply interrupted or at zero voltage for not more than 3 ms at any random time in the supply cycle. There shall be more than 1s between successive interruptions.

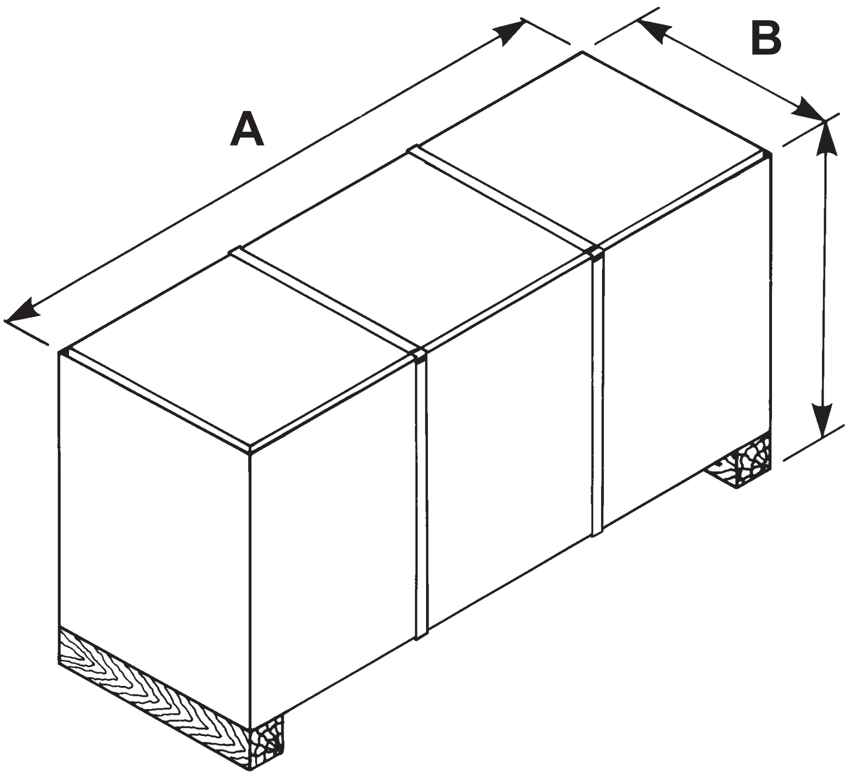
Voltage dips:

Voltage dips shall not exceed 20 % of the peak voltage of the supply for more than one cycle. There shall be more than 1 second between successive dips.

2. Packaging

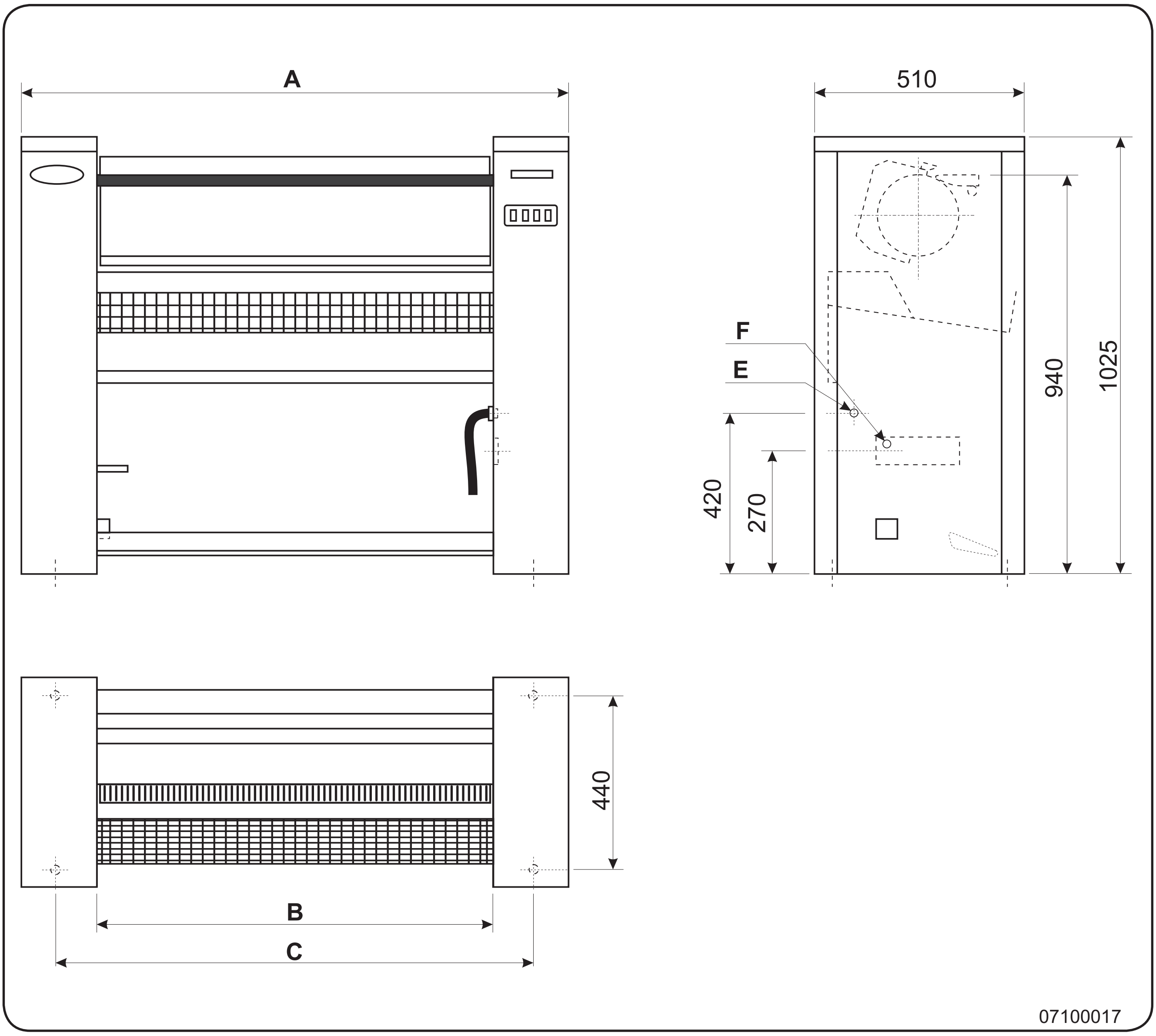
The ironing machine is secured to a transport pallet and packaged in a cardboard box.

Ironing width	Units	1 m	1.4m	1.6m
Packaging dimensions (boxed)				
Lenght (A)	**mm**	1480	1880	2130
Width (B)	**mm**	540	540	540
Height (C)	**mm**	1150	1150	1150
Weight	**kg**	138	165	185



Neither base nor sealing are indispensable.

It is yet possible to fix the ironer to the floor.
To do so, use the holes made to block the machine on the transport pallet.



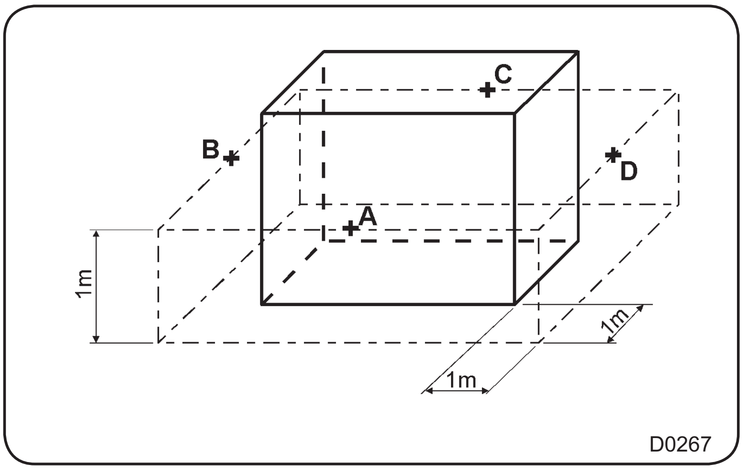
	Ironing width	units	1 m	1.4 m	1.6 m
A	Overall length	mm	1395	1795	2045
B	Length of feeding table	mm	1000	1400	1650
	Cylinder diameter	mm	230	230	230
C	Distance between feet	mm	1220	1620	1870
	Evacuation diameter	mm	nothing	36/40	36/40
	Electrical connection	-	see table	see table	see table
	Main voltage	V	see table	see table	see table
	Frequency	Hz	50/60	50/60	50/60
E	Power supply cable	mm²	see table	see table	see table
	Electric power, total load	kW	5.20	7.50	8.70
	Electric heating power	kW	5.00	7.20	8.40
	Max. hourly consumption	kWh/h	4.28	5.82	7.27
	Max. water evaporation capacity*	l/h	5.00	6.78	8.05
	Heat loss	W	150	225	260
F	Control fuse (250 V)	A	1.25	1.25	1.25
	Movement motor power	kW	0.18	0.18	0.18
	Fan motor power	kW	nothing	0.06	0.06
	Ironing speed at 50 (60) Hz	m/min	3.4 (4)	3.4 (4)	3.4 (4)
	Heating surface	m²	0.164	0.230	0.270
	Weight	kg	120	140	165

Ironing width	Supply voltage	Rated intensity	Main switch	Connection cable section	Fuse
1 m	400/415 V 3+N+E ~ 50/60 Hz	7.4 A	4 x 20 A	5 x 2.5 mm²	10 A
1 m	400/415 V 3+E ~ 50/60 Hz	7.4 A	3 x 20 A	4 x 2.5 mm²	10 A
1 m	230/240 V 3+E ~ 50/60 Hz	12.8 A	3 x 20 A	4 x 2.5 mm²	16 A
1 m	200/208 V 3+E ~ 50/60 Hz	14.8 A	3 x 20 A	4 x 2.5 mm²	16 A
1 m	440/460 V 3+E ~ 50/60 Hz	6.7 A	3 x 20 A	4 x 2.5 mm²	10 A
1 m	230 V mono 2+E ~ 50/60 Hz	23.2 A	2 x 32 A	3 x 6 mm²	35 A
1 m	208 V 2+E ~ 50/60 Hz	25 A	2 x 32 A	3 x 6 mm²	35 A
1.4 m	400/415 V 3+E ~ 50/60 Hz	10.7 A	4 x 20 A	5 x 2.5 mm²	16 A
1.4 m	400/415 V 3+N+E ~ 50/60 Hz	10.7 A	3 x 20 A	4 x 2.5 mm²	16 A
1.4 m	230/240 V 3+E ~ 50/60 Hz	18.5 A	3 x 25 A	4 x 2.5 mm²	25 A
1.4 m	200/208 V 3+E ~ 50/60 Hz	21.3 A	3 x 25 A	4 x 2.5 mm²	25 A
1.4 m	440/460 V 3+E ~ 50/60 Hz	9.7 A	3 x 20 A	4 x 2.5 mm²	16 A
1.4 m	230 V mono 2+E ~ 50/60 Hz	33.6 A	3 x 40 A	3 x 6 mm²	50 A
1.6 m	400/415 V 3+N+E ~ 50/60 Hz	12.5 A	4 x 20 A	5 x 2.5 mm²	16 A
1.6 m	400/415 V 3+E ~ 50/60 Hz	12.5 A	3 x 20 A	4 x 2.5 mm²	16 A
1.6 m	208 V 3+E ~ 60 Hz	23 A	3 x 32 A	4 x 6 mm²	35 A
1.6 m	240 V 3+E ~ 60 Hz	20 A	3 x 25 A	4 x 6 mm²	25 A
1.6 m	440 V 3+E ~ 50/60 Hz	11.5 A	3 x 20 A	4 x 2.5 mm²	16 A

* With 20 % residual moisture content and 100 % roller utilization (according to ISO 93.98 standard).

Noise level

Airborne noise emitted by the machine (values established as from measurements made on the machine at points A,B,C,D).



Ironing width		1 m	1.4 m	1.6 m
Weighted acoustic pressure level (A) in dB(A)	Point A	52	54	54
	Point B	57	57	57
	Point C	52	52	52
	Point D	59	59	59

This ironing machine should only be used for previously washed and pre-dried, machine-ironable textiles.

In this normal case of use, it is not necessary to connect the exhaust duct to the open air.

In the opposite case, the exhaust duct must be connected to the open air, by the shortest way, and with as few bents as possible.

Incline the flexi-hose downwards, as compared to the machine.

Protect the end of the exhaust duct from the bad weather.

Do not connect the exhaust duct to a gas, coal, fuel oil furnaces chimney. Separate it also from any other ducting (tumble dryer, finishing cabinet...).

Installation

The ironer must be transported to its final position in the laundry before the pallet is removed.
Remove the cardboard box and the two side panels (key included).

Fig. 1

Remove the 2 fixing screws (1 screw per casing) which fix the machine to the transport pallet, and unload the machine.

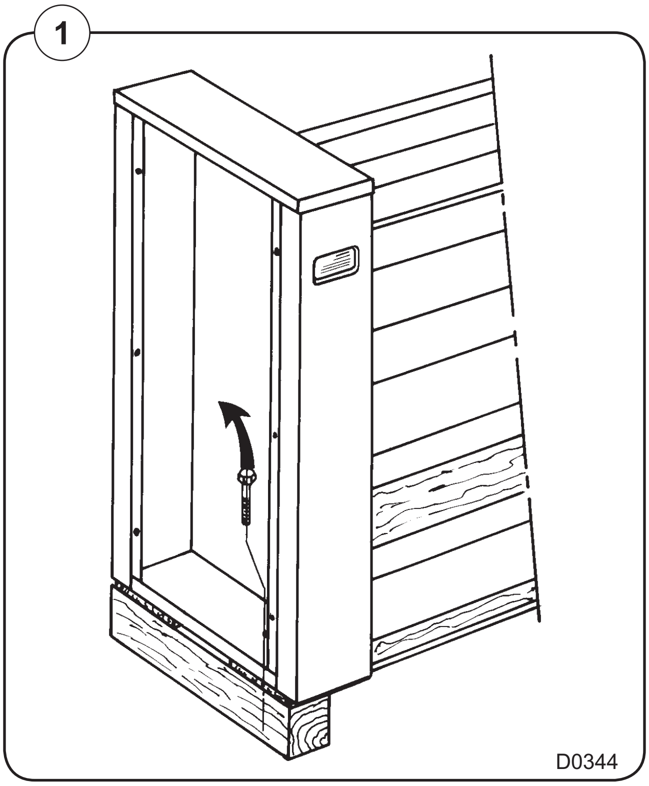


Fig. 2

Install the ironer in an area where it is easilly accessable by both operators and service technicians.

Make sure that the side of the machine is at least 100 cm away from walls or other machines.

In addition, leave a minimum of 10 cm between the machine and any rear wall.

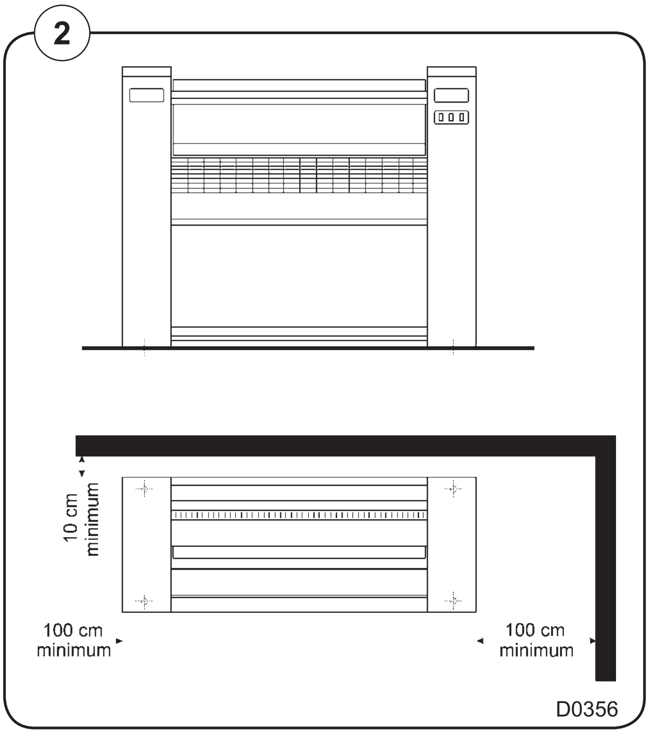


Fig. 3 Install the four adjustable feet and counternuts delivered with the machine as shown on the Fig. 3 below.

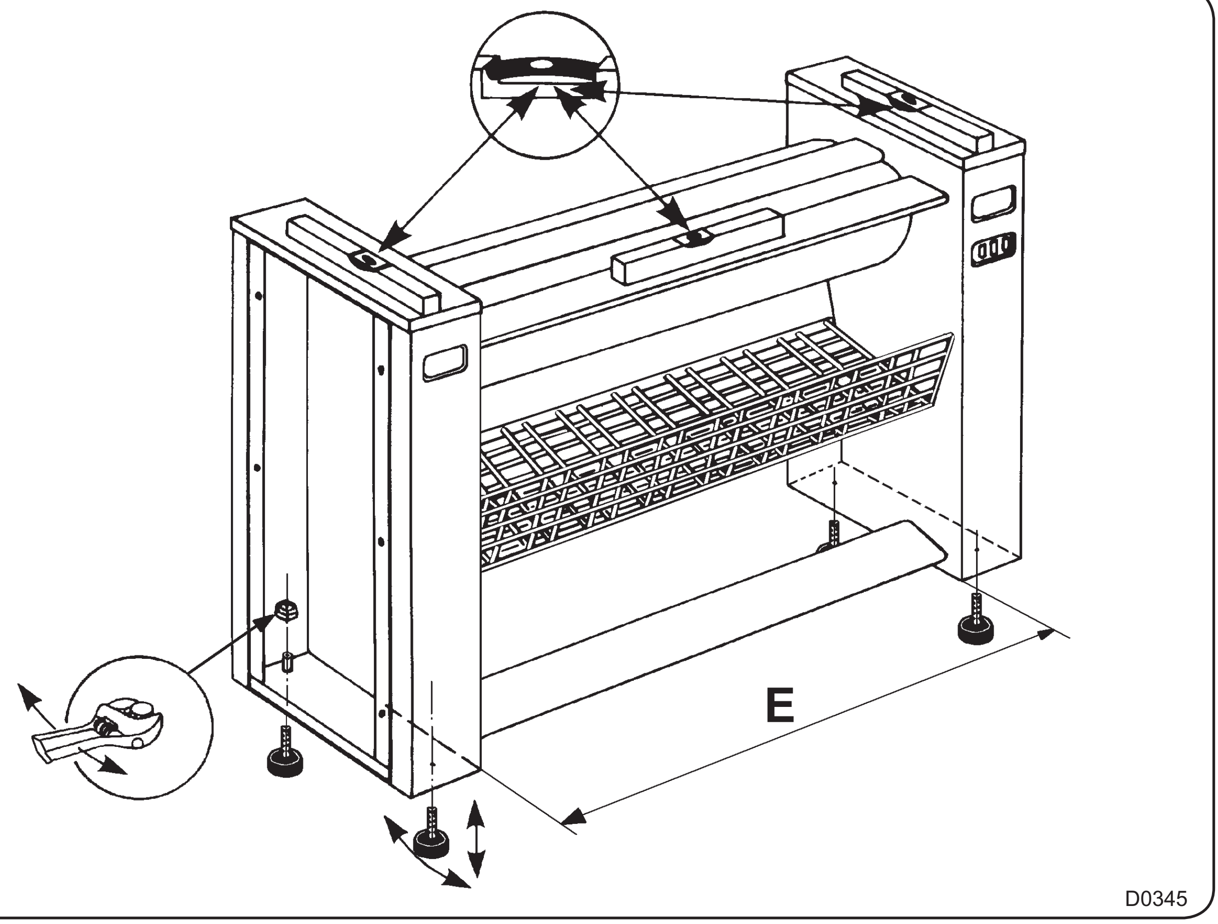
Place the machine on a perfectly stable and level floor. Check the horizontality of the machine using a spirit level at both its centre and ends.

If required, use the adjustable feet to level the machine then lock with the counternuts.

Control the floor space (E) between the two casings in order for the treadle to move correctly.

Control manually the functionning of the pedal which has to move freely with no jamming.

3



Work station lighting

Lighting should be designed and installed so as to prevent operator eye fatigue (good all over uniform lighting without bothersome glare) and provide a correct working light.

The average lighting recommended by European organisations is 300 lux.

The work station should have as much natural lighting as possible.

Electrical connection

CAUTION

Prior to use, the machine should be plugged into a correctly earthed power socket complying with the standards in force.

SAFETY

The mechanical and electrical installation of the machine should only be done by qualified personnel.

CAUTION

Make sure that both the power voltage is correct and the power supply of your installation is sufficient before connecting the machine.

Use only a cable to supply the machine.

Connect the machine to a four-pole switch and protective fuses (customer supply). The openning distance of the four-pole switch contact should be 3 mm minimum.

The values of these apparatus are indicated in chapter 3 -technical characteristics.

Install the main switch in an easily accessible position.

Insert the power cable into the stuffing box provided for this purpose.

Three-phase connection 3N AC + E (PE)

Fig. 4

Connect the machine's power cable to the terminal block on the printed circuit provided for the purpose.

L1 Phase no 1

L2 Phase no 2

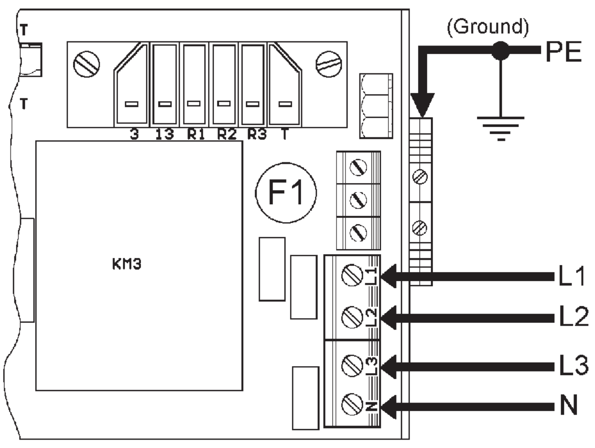
L3 Phase no 3

N Neutral

PE Earth connection

F1 Control fuse to protect the electrical control circuit (1.25 A).

4



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Three-phase connection 3 AC + E (PE)

Fig. 5

Connect the machine's power cable to the terminal block on the printed circuit provided for the purpose.

L1 Phase no 1

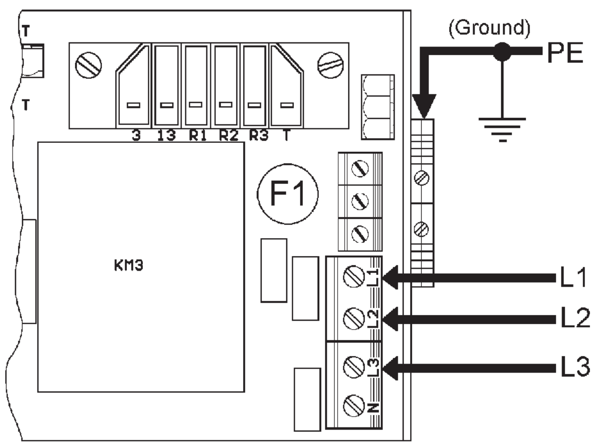
L2 Phase no 2

L3 Phase no 3

PE Earth connection

F1 Control fuse to protect the electrical control circuit (1.25 A).

5



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Single-phase connection 1N AC + E (PE)

Fig. 6

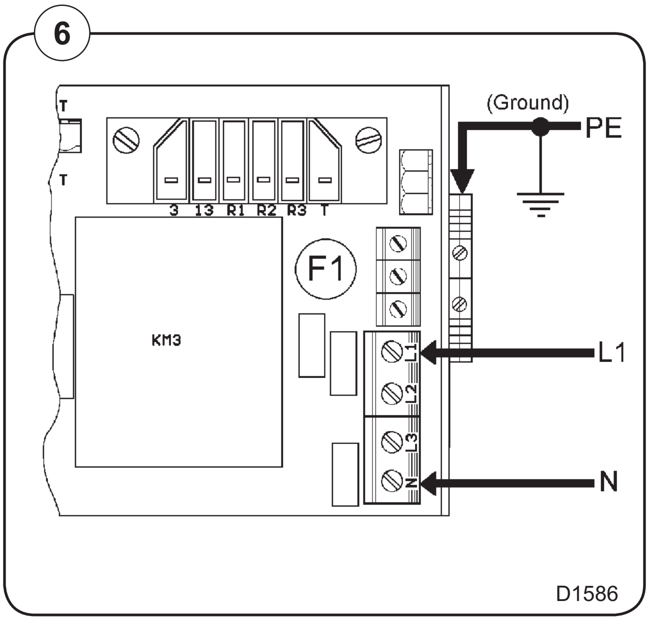
Connect the machine's power cable to the terminal block on the printed circuit provided for the purpose.

L1 Phase no 1

N Neutral

PE Earth connection

F1 Control fuse to protect the electrical control circuit (1.25 A).



Single-phase connection 1 AC + E (PE)

Fig. 7

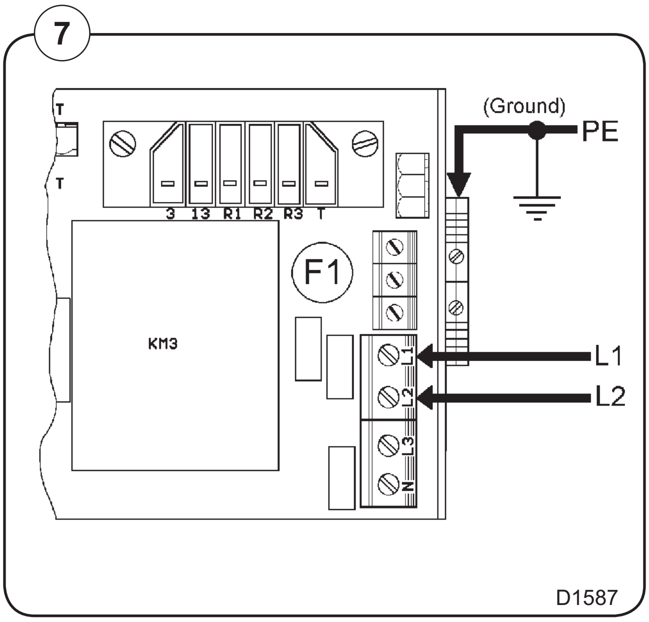
Connect the machine's power cable to the terminal block on the printed circuit provided for the purpose.

L1 Phase no 1

L2 Phase no 2

PE Earth connection

F1 Control fuse to protect the electrical control circuit (1.25 A).



Mains transformer connection diagrams according to the customer's various mains voltages (machines equiped with a transformer only).

400 Volts supply

Fig. 8 Measure the mains voltage at the primary with a voltmeter between 0 and 400 volts of the transformer.

- If the voltage is equal to 400 volts, do not touch the transformer connection which should be as indicated in the margin.

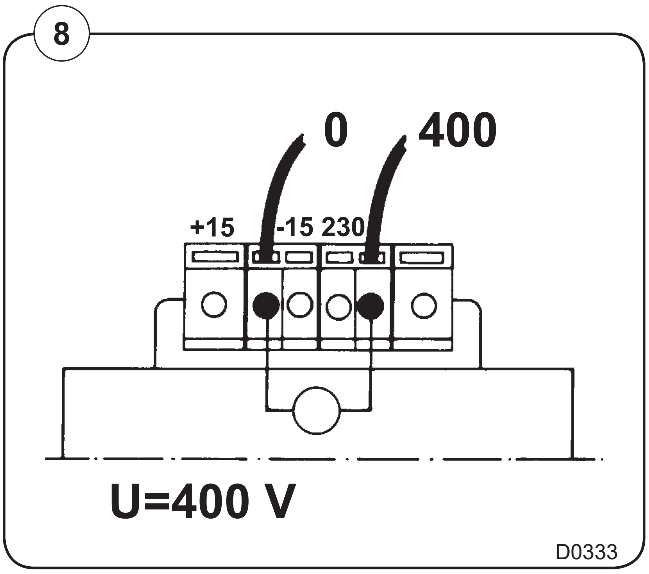
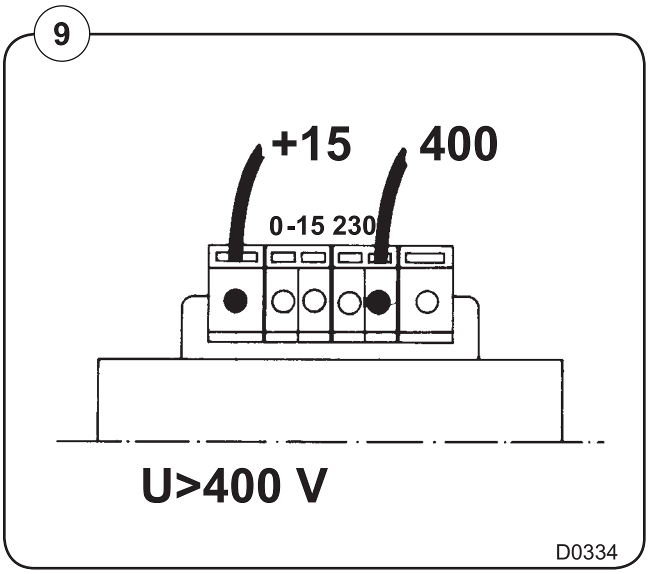
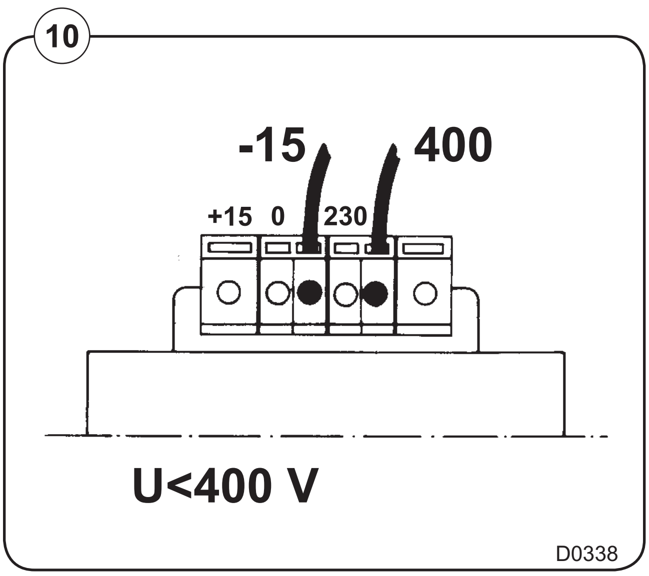


Fig. 9 - If the voltage is > à 400 volts (example: 420/430 volts), connect the threads to the transformer as indicated in the margin.



Note : the latter solution is advised even it the voltage is normally equal to 400 Volts, but may be subject to time variations ; your machine electrical equipment will not be overfed.

Fig. 10 - If the voltage is far < 400 volts (example: 370/380 volts), connect the threads to the transformer as indicated in the margin.



NB:

Once connected, make sure to check the correct order of phase connections.

CAUTION

If the phases are not connected the right order, when switching on the machine, the bed remains in contact against the cylinder, this last rotates clockwise (see from the machine right side), <u>but the safety hand device is inoperative</u>. You must not, in any case, continue to operate the ironer. Stop the machine and invert the phases.

Check before use

Fig. 11

The ironing machine is delivered with the tray in contact with the cylinder.

1. Check that the machine’s on/off switch is to "0".
2. Turn on the main switch of the machine.

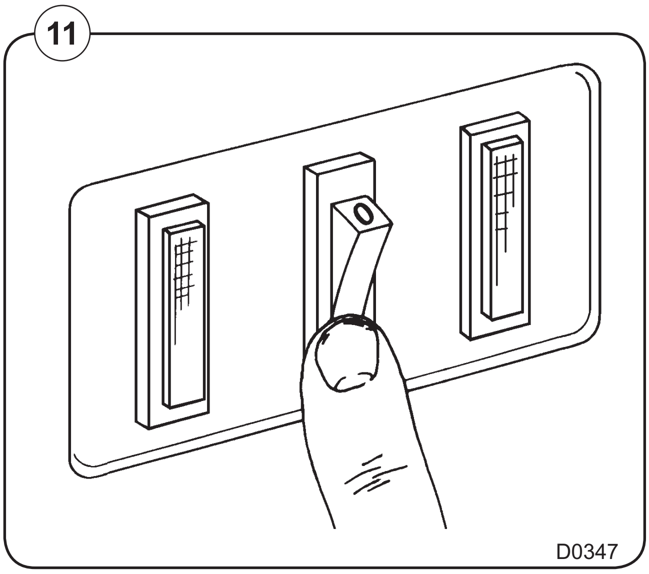
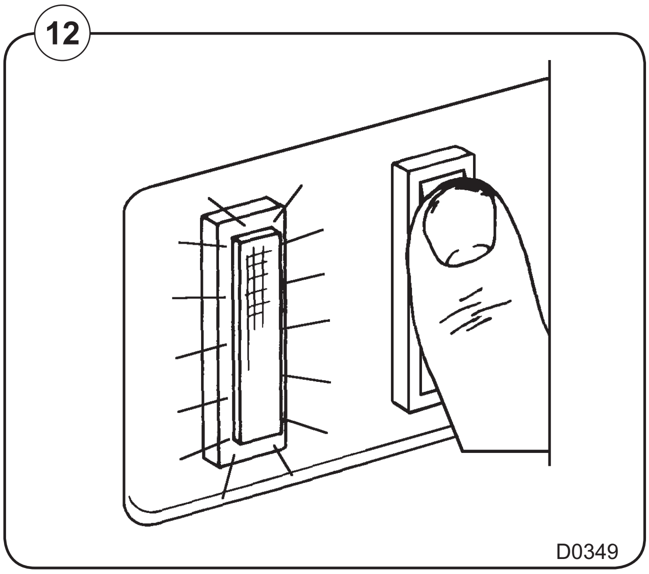


Fig. 12

3. Push on the "on/off" button, the green light is on, 4 cases (A, B, C or D) can now arise.



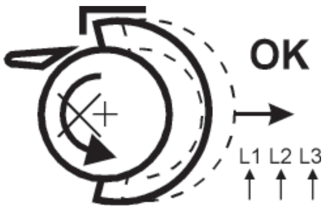
CAUTION

The control pedal must not be operated before making the following checks.

If the functionning of the machine does not correspond to either case (A) or (B), stop the machine with the On/off switch (Fig.8), put the main switch to off and invert the 2 phase wires on the power supply terminal block (Fig.4).

A

Phases in good order and bed closed



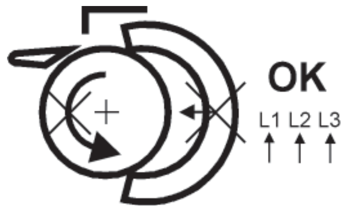
When starting up the ironer, the cylinder does not rotate and the bed moves away from the cylinder.

Everything is OK.

You can operate the ironer.

B

Phases in good order and bed opened



When starting up the ironer, the cylinder does not rotate and the bed does not move.

Everything is OK.

You can operate the machine.

C

Inverted phases and bed closed

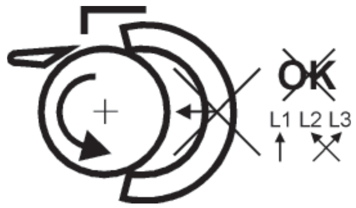
When starting up the ironer, the bed remains closed, the cylinder rotates the right way but the hand safety device is inoperative.

<u>Do not use the machine.</u>

Modify the phases order (see below)

D

Inverted phases and bed opened



When starting up the ironer, the cylinder rotates the wrong way and the bed blocks in rear position.

Release the bed and modify the phases order (see below and next page).

- Repeat operations points 1, 2 and 3, the tray should now move back.
- Turn the main switch off.
- Reinstall the side panels and lock the fixing screws.
- Remove the protective paper from around the cylinder.
- The ironing machine is now ready to be used.

Nota: At the first use, it is necessary to leave the cylinder heated turn for about one hour to allow the padding to ram. This running in allows to get a space between the tray and the cylinder in order to feed the linen easily.

Disconnecting the machine

N B:

If you wish to disconnect the electrical supply cable, it si more wise to do it once the machine is cooled down and to stop the ironer with the tray in contact with the cylinder.

Fig. 13

Proceed as follows :

- When the tray is cold, move it against the cylinder by pressing on the control pedal and activate the on/off switch to stop the electrical supply.
- Stop the electrical supply by the main switch.
- You can now disconnect the electrical sypply cable.
- To reconnect the machine, it is imperative to check the order of connection of the phases before starting the ironer (see previous page).

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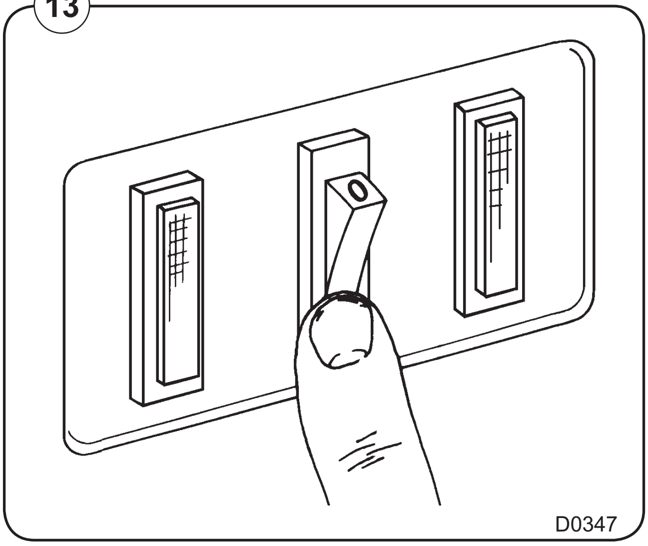

Releasing process to follow in case of connection while the tray is in back position.

Fig. 14

If you connect the machine with the tray in back position and the control pedal activated (when two wires of phase are inverted), an electrical device doubled with a mechanical system of locking prevents to deteriorate essential mechanism organs.

1. Stop the machine's electrical supply by the main switch.
2. Invert two wires of phase (see previous page).
3. Remove the right lateral casing.
4. Unscrew the screw (A) **while holding the tray**, this last comes automatically in position against the cylinder.
5. Block the screw again (A) and reassemble the lateral casing.

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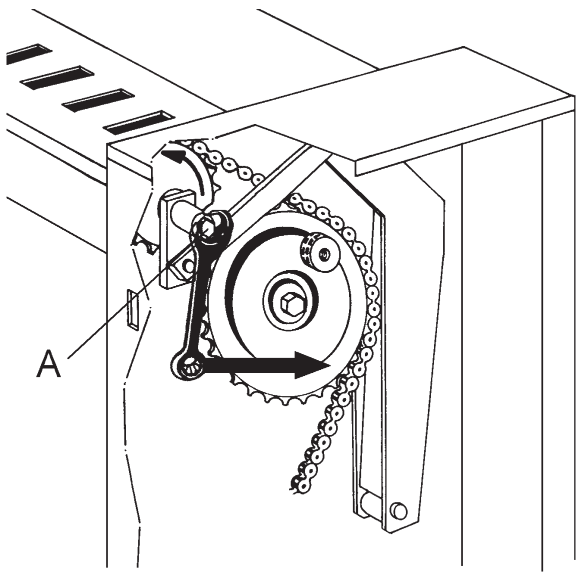

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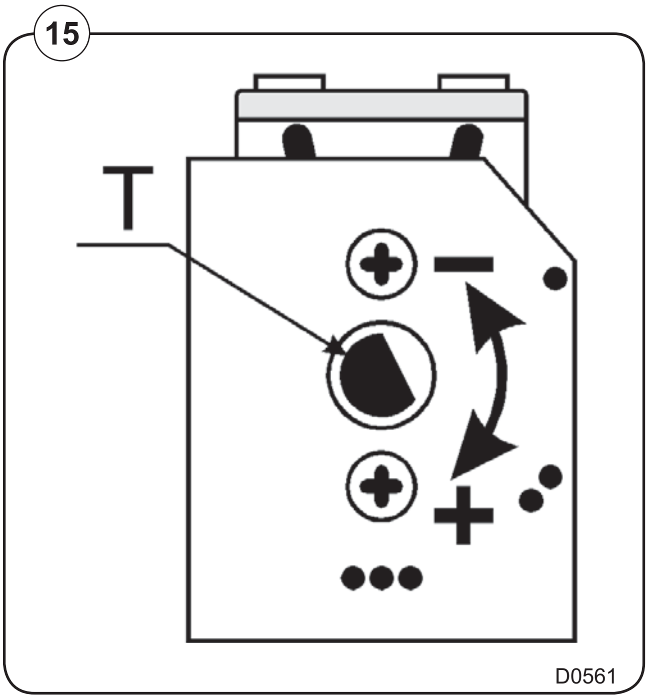
Safety Thermostat's adjustment

This ironer has a an adjustable safety thermostat in order to avoid damages of the cotton covering in case of machine stop with the bed closed.

This safety thermostat is adjusted in our plant so that the regulation thermostat doesn't go above the temperature corresponding to the position which is aproximatly 150 °C ; even when it is set on a higher temperature.

Fig. 15 If you want to increase the ironing temperature, dismantle the bed's back casing and turn the rod (T) of the safety thermostat.

This way, you can limit the maximum ironing temperature as you want.



Check-out

Before leaving, put the appliance into operation and allow to run a complete cycle. Watch to ensure that all burner system components function correctly.

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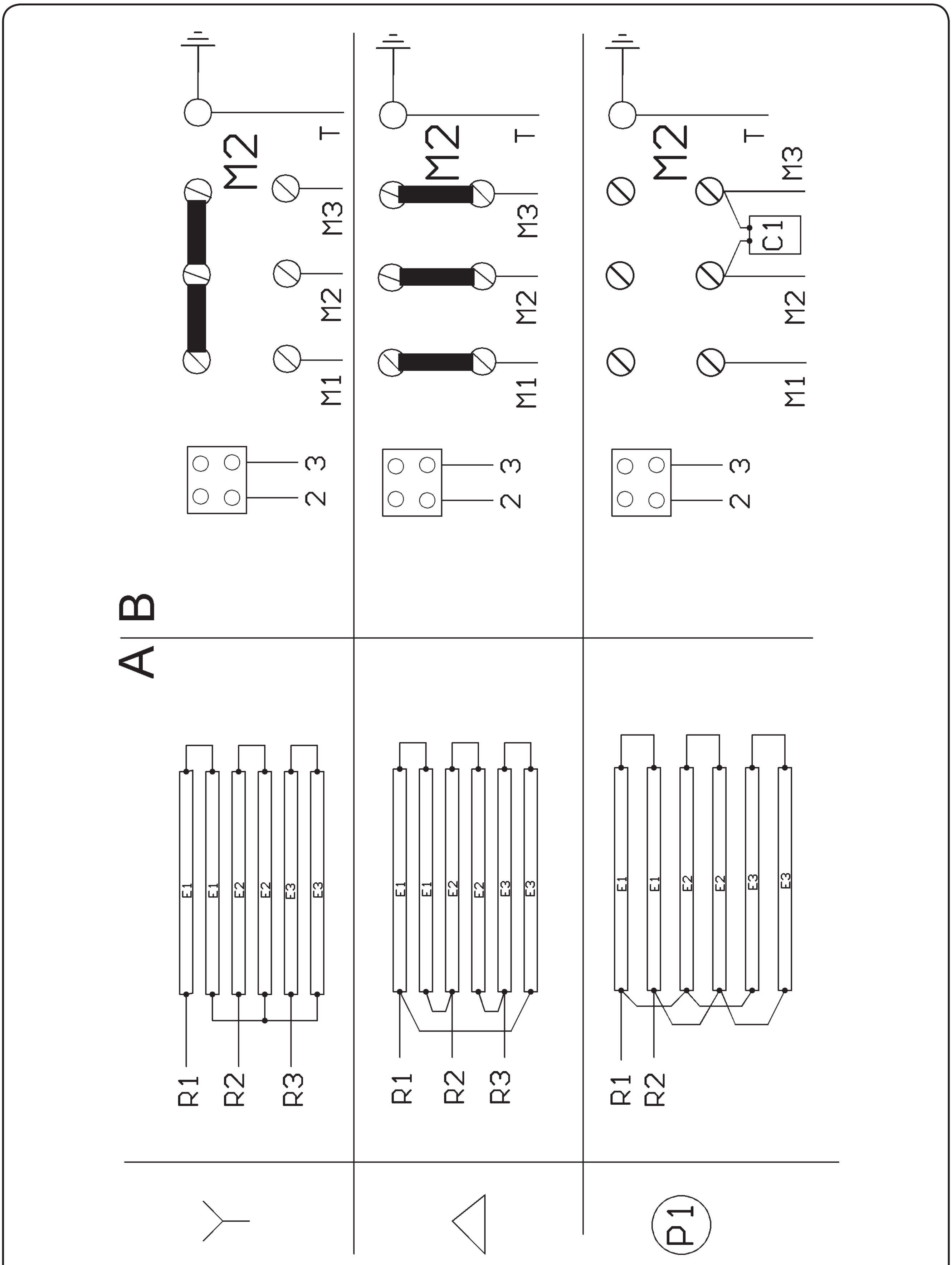

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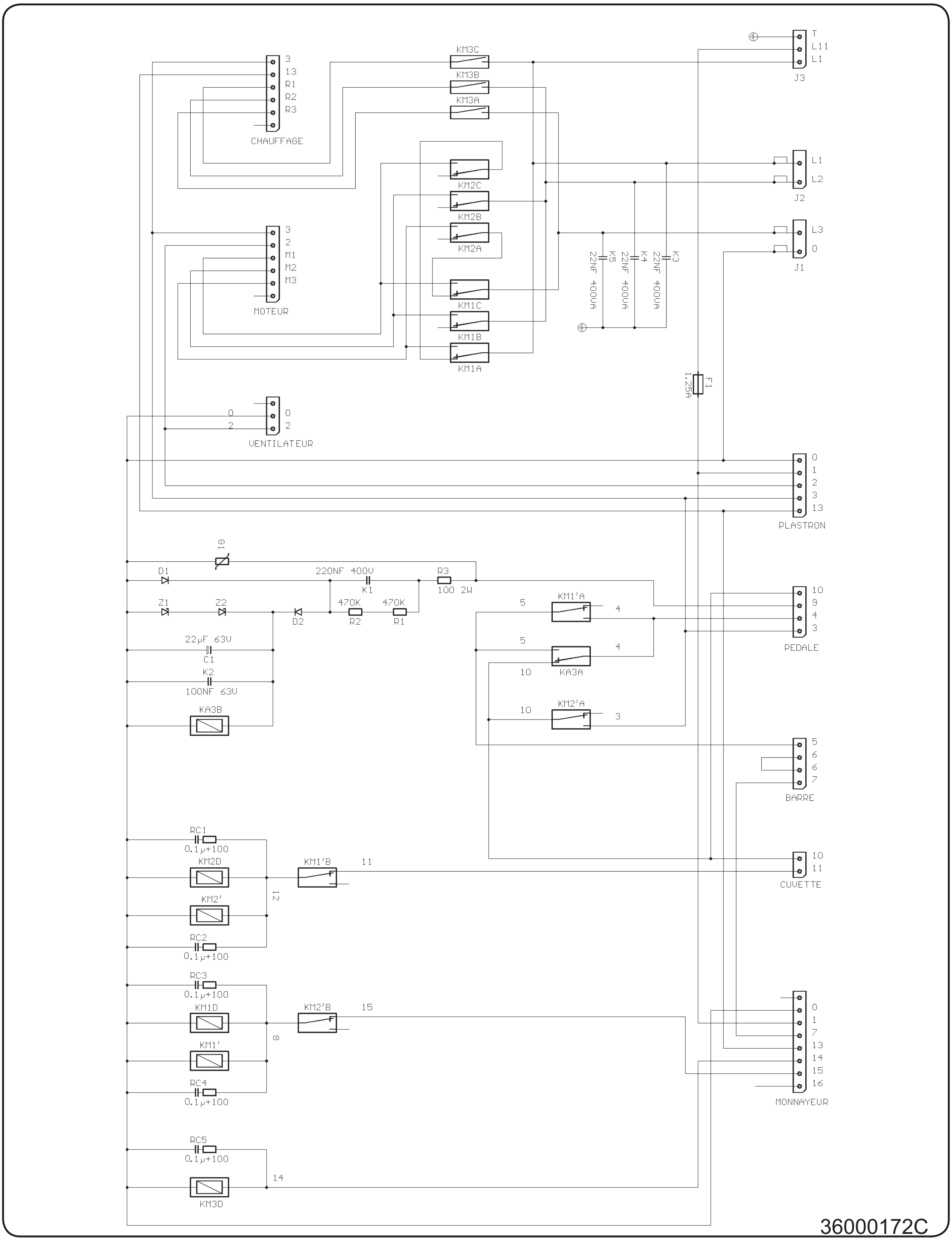
Star/Triangle Commutation diagram

A	Heating resistor commutation
B	Motion motor commutation
⅄	"Star" commutation from 380 to 460 volt three-phases
△	"Triangle" commutation from 200 to 240 volt three-phases
P1	Commutation from 200 to 240 volt monophase
C1	Phase shifting capacitor

Control diagram printed circuit



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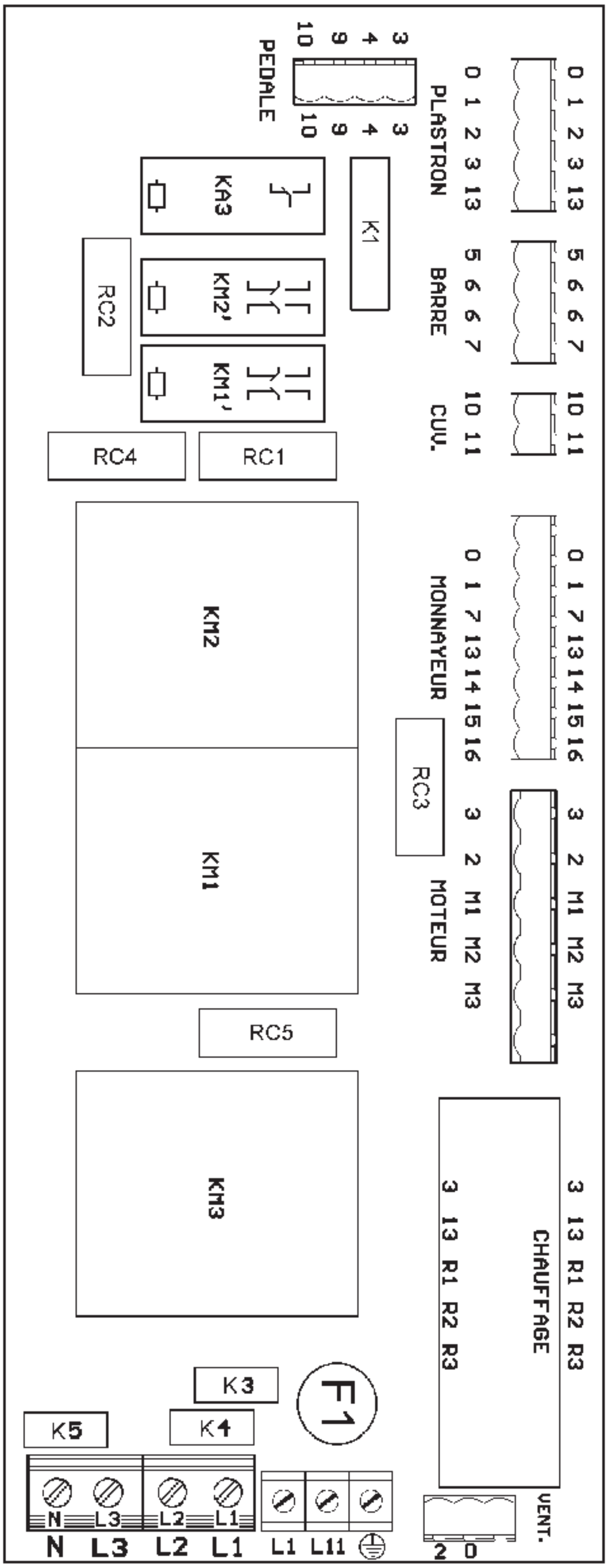
Component implantation printed circuit



PLASTRON = PANEL CONTROL
BARRE = BAR
CUV. = BED
MONNAYEUR = COIN OPERATING SYSTEM
MOTEUR = MOTOR
CHAUFFAGE = HEATING
VENT. = VENTILATOR
PEDALE = PEDAL

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Conversion of measurement units

The following is a list of correspondences of the main frequently used units, to avoid the need to use measurement unit conversion tables.

bar : 1 bar = 100 000 Pa
1 bar = 1.019 7 kg/cm²
1 bar = 750.06 mm Hg
1 bar = 10 197 mm H_2O
1 bar = 14.504 psi

british thermal unit : 1 Btu = 1 055.06 J
1 Btu = 0.2521kcal

calorie : 1 cal = 4.185 5 J
1 cal = 10^{-6} th
1 kcal = 3.967 Btu
1 cal/h = 0.001 163 W
1 kcal/h = 1.163 W

continental horse power : 1 ch = 0.735 5 kW
1 ch = 0.987 0 HP

cubic foot : 1 cu ft = 28.316 8 dm³
1 cu ft = 1 728 cu in

cubic inch : 1 cu in = 16.387 1 dm³

foot : 1 ft = 304.8 mm
1 ft = 12 in

gallon (U.K.) : 1 gal = 4.545 96 dm^3 or l
1 gal = 277.41 cu in

gallon (U.S.A.) : 1 gal = 3.785 33 dm^3 or l
1 gal = 231 cu in

horse power : 1 HP = 0.745 7 kW
1 HP = 1.013 9 ch

inch : 1 in = 25.4 mm

joule : 1 J = 0.000 277 8 Wh
1 J = 0.238 92 cal

kilogramme : 1 kg = 2.205 62 lb

kg/cm² : 1 kg/cm² = 98 066.5 Pa
1 kg/cm² = 0.980 665 bar
1 kg/cm² = 10 000 mm H_2O
1 kg/cm² = 735.557 6 mm Hg

pound : 1 lb = 453.592 37 g

meter : 1 m = 1.093 61 yd
1 m = 3.280 83 ft
1 m = 39.37 in

cubic meter : 1 m³ = 1 000 dm³
1 m³ = 35.314 7 cu ft
1 dm³ = 61.024 cu in
1 dm³ = 0.035 3 cu ft

pascal : 1 Pa = 1 N/m²
1 Pa = 0.007 500 6 mm Hg
1 Pa = 0.101 97 mm H_2O
1 Pa = 0.010 197 g/cm²
1 Pa = 0.000 145 psi
1 MPa = 10 bar

psi : 1 psi = 0.068 947 6 bar

thermie : 1 th = 1 000 kcal
1 th = 10^6 cal
1 th = 4.185 5 x 10^6 J
1 th = 1.162 6 kWh
1 th = 3 967 Btu

watt : 1 W = 1 J/s
1 W = 0.860 11 kcal/h

watt-hour : 1 Wh = 3600 J
1 kWh = 860 kcal

yard : 1 yd = 0.914 4 m
1 yd = 3 ft
1 yd = 36 in

temperature degrees :
0 °K = -273.16 °C
0 °C = 273.16 °K
t °C = 5/9 (t °F-32)
t °F = 1.8 t °C + 32